

REMARKS

Claims 1-8 and 18-20 are pending and under consideration. Claims 9–17 and 21–25 were withdrawn from consideration in response to a prior election requirement.

In the Office Action, Claims 1-8 and 18-20 were rejected.

In this amendment, Claims 1 and 18 are amended, and Claims 9–17 and 21–25 are cancelled. No new matter has been introduced as a result of this amendment.

Accordingly, Claims 1-8 and 18-20 are at issue.

I. 35 U.S.C. § 103 Obviousness Rejection of Claims

Claims 1-8 and 18-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,829,398 to Ouchi. Applicant respectfully traverses this rejection.

Claim 1 is directed to a hybrid circuit substrate with optical and electrical interconnects, which comprises a base substrate, a micro interconnect circuit section, and an optical interconnect circuit section.

Claim 1 recites “said micro interconnect circuit section and said optical interconnect circuit section are layered on said base substrate section so as to transmit an electrical signal and an optical signal.”

Moreover, the claimed optical interconnect circuit section is provided with an optical wave-guide having an input section and an output section of a optical signal at opposite ends thereof, and the claimed optical element is composed of a light emitting device with a light emitting section thereof facing the input section and a photo detecting device with a photo detecting section thereof facing the output section.

Thus, the optical wave-guide and the optical element are positioned on the base substrate with the micro interconnect circuit section positioned therebetween or the micro interconnect circuit section is positioned on the base substrate with optical wave-guide and the optical element positioned therebetween.

In contrast, Ouchi states “Further, an electric wiring 275 can be formed in the cladding layer 277 to construct an in-plane wiring in the optical waveguide apparatus” (See column 20,

line 58 - 60). Thus, in Ouchi the electrical wiring (micro interconnect circuit section) 275 and the optical device (optical interconnect circuit section) 278 are mounted together in the cladding (insulating) layer 277. As such, Ouchi fails to teach or suggest that the micro interconnect circuit section and the optical interconnect circuit section are layered on the base substrate section.

Thus, Claim 1 is allowable over Ouchi, as are dependent Claims 2 – 8, for at least these same reasons.

In regard to the rejections of Claims 18–20, Claim 18 also recites that the same distinguishing structure of the hybrid circuit substrate with optical and electrical interconnects. Thus, Claim 18 is also patentable over Ouchi, as are dependent Claims 19–20 for at least the same reasons.

II. Conclusion

In view of the above amendments and remarks, Applicant submits that Claims 1–8 and 18–20 are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Respectfully submitted,

Dated: September 25, 2006

By: /David R. Metzger/
David R. Metzger
Registration No.: 32,919
SONNENSCHNEIDER NATH & ROSENTHAL LLP
P.O. Box 061080
Wacker Drive Station, Sears Tower
Chicago, Illinois 60606-1080
(312) 876-8000